Transmission vs. Distribution: A Pipeline Safety Overview

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Contents

- Who regulates the pipeline?
- Definitions
- What's next in the regulatory arena?
- New and Existing Programs
- Landfill project example, Memphis,TN
- Summary
- Acknowledgements

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Who Regulates the Pipeline?

• The Department of Transportation (Office of Pipeline Safety, OPS) is the main regulatory agency responsible for regulating the operation and maintenance of jurisdictional natural gas pipelines under 49 CFR Part 192. Many state agencies (Public Service Commissions) have adopted the regulations and have been approved to regulate (inspect for compliance) jurisdictional "intrastate" pipelines. This leaves the OPS with the responsibility of focusing their attention on regulating (inspecting for compliance) "interstate" pipelines.

§ 192.1 Scope of part.

(a) This part prescribes minimum safety requirements for pipeline facilities and the transportation of gas, including pipeline facilities and the transportation of gas within the limits of the outer continental shelf as that term is defined in the Outer Continental Shelf Lands Act (43 U.S.C. 1331).

Definitions*

Transmission line means a pipeline, other than a gathering line, that:

(a) Transports gas from a gathering line or storage facility to a distribution center, storage facility, or large volume customer that is not downstream from a distribution center;

(b) Operates at a hoop stress of 20 percent or more of SMYS; or

(c) Transports gas within a storage field. A large volume customer may receive similar volumes of gas as a distribution center, and includes factories, power plants, and institutional users of gas.

Transportation of gas means the gathering, transmission, or distribution of gas by pipeline or the storage of gas, in or affecting interstate or foreign commerce.

* § 49 CFR Part 192.3

Definitions*

- *Distribution line* means a pipeline other than a *gathering* or transmission line
  - *Gathering line* means a pipeline that transports gas from a current production facility to a transmission line or *main*
    - *Main* means a distribution line that serves as a common source of supply for more than one *service line*
      - *Service line* means a distribution line that transports gas from a common source of supply to: (1) a customer meter or the connection to a customer's piping, whichever is farther downstream, or (2) the connection to a customer's piping if there is no *customer meter*
        - Customer Meter is the meter that measures the transfer of gas from an operator to a consumer

* § 49 CFR Part 192.3

Definitions

- Are you confused yet?

What's Next in the Regulatory Arena?

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New and Existing Programs

- "OQ" - DOT Operator Qualification (49 CFR 192.801-.809)
- "B-31.Q" – ASME "OQ" Program Guidelines
- "IMP" - Integrity Management Program
- "DIMP" - Distribution Integrity Management Program
- "NPMS" – National Pipeline Mapping System
- "OSHA" – Requirements are separate, yet still applicable
- "EPA" – Requirements are separate, but may be applicable

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Example New Program
Operator Qualification Program

§ 192.809 General.

(a) Operators must have a written qualification program by April 27, 2001

(b) Operators must complete the qualification of individuals performing covered tasks by October 28, 2002

(c) Work performance history review may be used as a sole evaluation method for individuals who were performing a covered task prior to October 26, 1999

(d) After October 28, 2002, work performance history may not be used as a sole evaluation method

[Amdt. 192-86, 64 FR 46865, Aug. 27, 1999, as amended by Amdt. 192-90, 66 FR 43524, Aug. 20, 2001]

Operator Qualification Program

§ 192.805 Qualification program.

Each operator shall have and follow a written qualification program.

The program shall include provisions to:

(a) Identify covered tasks;

(b) Ensure through evaluation that individuals performing covered tasks are qualified;

(c) Allow individuals that are not qualified pursuant to this subpart to perform a covered task if directed and observed by an individual that is qualified;

(d) Evaluate an individual if the operator has reason to believe that the individual's performance of a covered task contributed to an incident as defined in Part 191;

(e) Evaluate an individual if the operator has reason to believe that the individual is no longer qualified to perform a covered task;

(f) Communicate changes that affect covered tasks to individuals performing those covered tasks; and

(g) Identify those covered tasks and the intervals at which evaluation of the individual's qualifications is needed.

Successful Transmission Line LFG Example Memphis, TN

- CPL Systems was tasked with developing the partnership with the public utility and assisting in the development of their new safety requirements for landfill gas
- LFG to be transported 5 miles in a dedicated line that Memphis Light, Gas and Water (MLGW) would own and operate
- MLGW had to develop and understand how this gas applied to the federal standards as did their other utility of natural gas
- In the final analysis, MLGW's existing operating and maintenance procedures for the natural gas system were amended to include the LFG system in the appropriate portions of the manual

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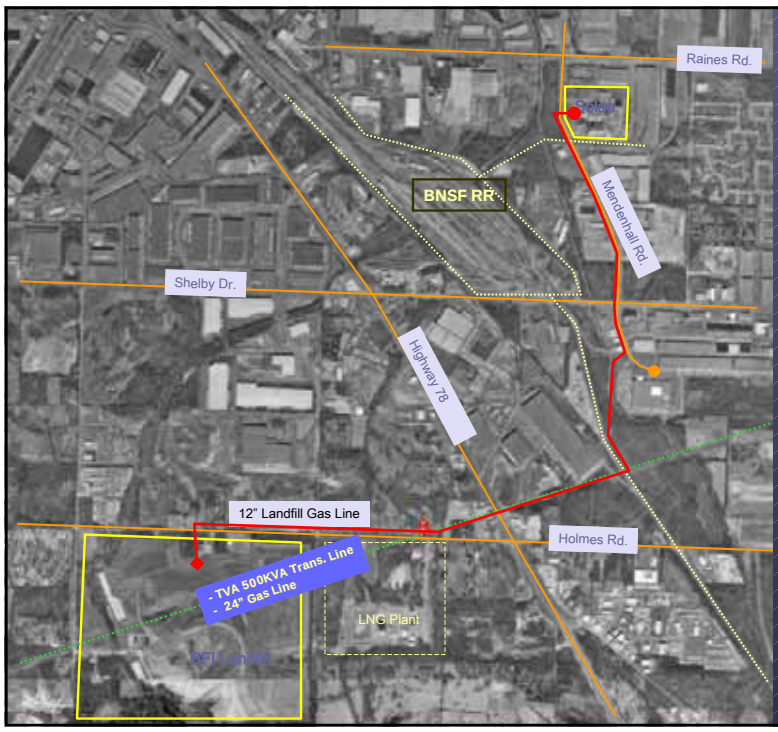

Pipeline Route

MLGW Hurdles to Overcome

Requirements in the MLGW manual that specifically impacted the LFG system included the following:

- Odorization - This is where we received agreement from the TRA to use quarterly sulfur analyses to indicate adequate natural odorization, as opposed to our normal method of frequent “sniff” tests on the NG system
- Emergency response - Specific procedures involving MLGW, CPL and Solae were developed to quickly and efficiently respond to any failure of, or emergency on, the LFG system. This includes enlisting the assistance of local emergency officials, as needed
- Other O&M activities are conducted on the LFG system as if it were a NG pipeline. These include: pressure surveillance via telemetry to our Systems Operation department (SCADA system); leak survey and reporting; aerial patrolling; and valve maintenance

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Regulatory Issues

- Federal DOT regulation 192 covers the transportation of natural gas
- The Tennessee Regulatory Authority (DOT approved) is the State enforcement agency on pipeline safety issues.
- According to DOT definition, this type of pipeline has been characterized as a transmission pipeline
- This type of gas has to be addressed separately in O&M manuals, with all records available for TRA inspections

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Safety Issues

- Presence of Vinyl Chloride and other constituents raised concern for the utility
- To err on the side of caution, first responder is a contractor with “moon suits”
- In collaboration with the TRA, it was decided NOT to odorize the gas but to use Sulfur content as the gauge of detection
- Needed an MSDS on the actual gas from the landfill to determine its flammability limit, etc. (OSHA 29 CFR 1910.1200)

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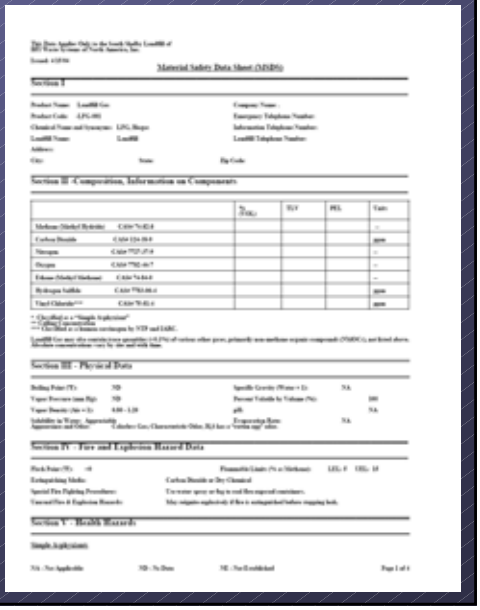
Environmental

- A new MSDS is developed and approved for the site specific LFG for use by all parties



Material Safety Data Sheet (MSDS)

Section I

Section III - Physical Data

Section IV - Fire and Explosion Hazard Data

Section V - Health Hazards

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Pipeline Specifications

- Receipt Pressure : 29 PSIG
- Delivery Pressure : 10 PSIG
- Maximum Flow Rate : 8,000 SCFM
- Distance : Approximately 5 miles long
- Size : 12" diameter (to meet pressure and flow requirements)
- HDPE for corrosion resistance

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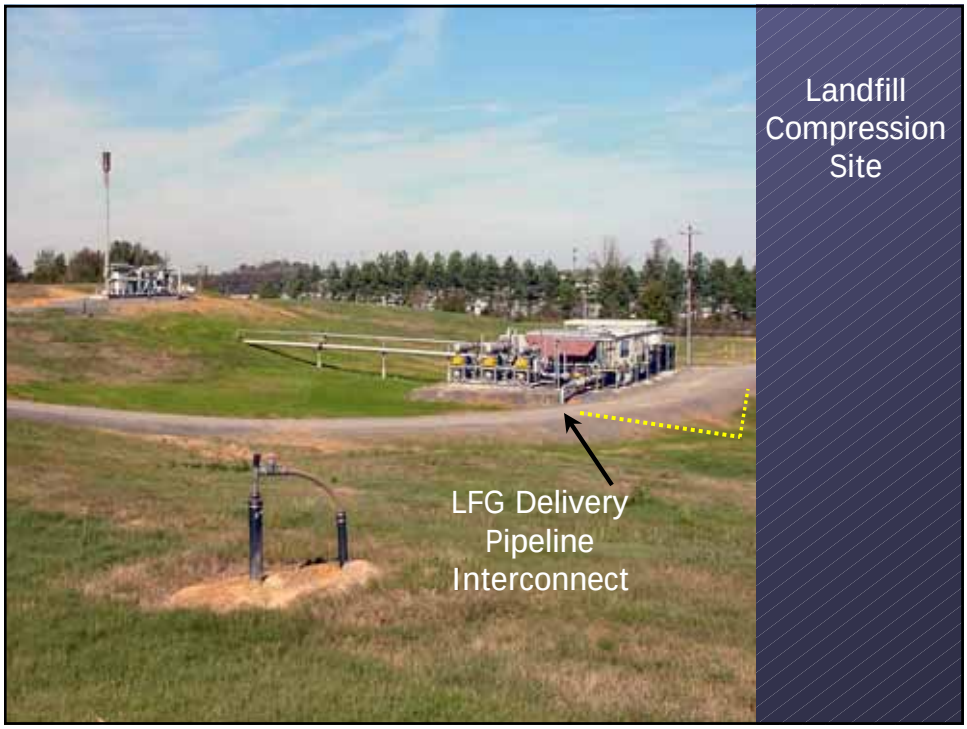
Pipeline Construction in Utility ROW



Landfill Compression Site

Pipeline Construction on private property

Summary

If you cross or impede public property with a pipeline you will be subject to the federal requirements of:

•PART 192--TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS

Are you a distribution line or transmission line?

• This will be determined by the local, state and federal requirements of your location and classification for the pipeline.

January 19, 2006

Acknowledgements

I would like to thank the following people for their contribution to this presentation.

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January 19, 2006